COMPUTER CRUSADERS in the REALM of--

DATA BASES

WHERE ALL OF THE FACTS ARE AT YOUR FINGERTIPS!

SUPERSEARCHER DETECTIVE, HISTORIAN, AND KEEPER OF WORLD RECORD BOOKS. POWERS: HAS SPECIAL VISION FOR ZEROING IN ON ANY NEEDED FACT IN A MASS OF INFORMATION; CAN INSTANTLY ORGANIZE AND COMMUNICATE LONG LISTS OF FACTS.

ASTRODATA ASTRONAUT, ASTRONOMER, AND COLLECTOR OF MEMORABILIA. POWERS: CAN QUICKLY GATHER ALL OF THE FACTS ABOUT ANY SITUATION; REMEMBERS EVERYTHING FOREVER.

DATANAUTS EVIL UNDERWORLD FACT-FUMBLERS. POWERS: CAN ERASE FIELDS, JUMBLE RECORDS, EAT NUMBERS, AND FOUL ALPHABETIZING--ALL WITHOUT BEING SEEN!

RON ZALME

CODE WORDS...

DATA BASE: A computerized "index card file" to collect, organize, and store information.

DATA: Information, facts.

SEARCH: To find records with certain information.

RECORD: An arrangement of fields on a computerized "file card."

FILE: A collection of records that go together.

SORT: To organize records in a certain order.

FIELD or CATEGORY: A specific type of data, such as "Name" or "Date."

REPORT: A summary or printout of records from a file.

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Illustration by Ron Zalme
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Super Page Series
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SCHOLASTIC

TEACHING GUIDE

By Janice Sork

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COMPUTER CRUSADERS SUPER PAGE SERIES

Each of the six Super Pages in this series features "Super Heroes" especially created to draw students' attention to an essential computer application. The September Super Page explored word processing, October emphasized graphics, while Nov./Dec. will now focus on data bases. Jan./Feb. will explore desktop publishing, March/April will focus on spreadsheets, and May/June will address "future tools."

Each Super Page is backed with a teacher's guide full of management tips and a set of activity cards through which kids master computer applications skills and complete a series of curriculum-integrated computer tasks.

MANAGEMENT TIPS

SUPER HEROES BULLETIN BOARD

The Computer Crusaders Super Page series can continue as the centerpiece of a year-long bulletin board display.

1. Remove the October Super Page, headline letters, record keeping charts and graphics passports. Leave the pocket charts up for new passports and activity cards.

2. Create a cutout letter headline reading, "SUPER HEROES OVERPOWER DATANAUTS IN DATA BASES."

3. Refill pockets with the new Super Hero Passports. (Fill in student names first.)

4. Purchase or create a grid tagboard for the record keeping chart.

5. Staple up November/December Super Page.

6. Mat open space with colored construction paper for displaying student work.

7. Photocopy, cut apart, and laminate several sets of the activity cards, below. Place these in a pocket on the board.

8. Select a data base management program for students to use, such as *Secret Filer, Bank Street School Filer, PFS: File,* or *AppleWorks.* Create the sample data bases specified in each activity, and save each one on a clearly labeled separate disk. Store the data base program and data disks together in pockets on the bulletin board or near the computer.

STUDENT SUPER HERO IDENTITIES

If they have not already done so, have your students make up a super hero name and identity for themselves (including strengths and weaknesses) to use in conjunction with this Super Page series throughout the year. For this Super Page, the student super hero identity will be used for the Super Hero Passport and several activities.

SUPER HERO PASSPORTS

Make a photocopy of the blank passport above for each student. Introduce or review your chosen data base management program, and give students time to learn and practice such functions as: creating a data file, updating an existing data file (adding, modifying, deleting data), searching, sorting (alphabetical and numerical sorts), making a report, saving and printing a report.

There are three achievement levels for students to work towards. Level I denotes mastery of data base vocabulary and entering data into a data file. Level II is for students who can design fields and create their own data file. Level III is for students who can search, sort, and analyze data. As students demonstrate mastery of these skills, mark or add a sticker to the achievement boxes listed on each passport.

SUPER HERO PASSPORT

to the Realm of Data Bases

Earth Name: _____

Super Hero Name: _____

◯ **Base Basic**
◯ **Uncanny Creator**
◯ **Data Detective**

Signed,
Astrodata
Super Searcher

GRID CHART RECORD-KEEPING

The grid chart will help you keep track of student progress on the activity cards. List the activity cards along one axis of the grid, and add your students' names on the perpendicular axis. Paste-on stars, stickers, or a simple felt pen mark can be added as students complete the computer activities.

COOPERATIVE LEARNING ACTIVITIES

Several of the activities below are designed for cooperative learning groups of two to five students each. When forming these groups, make sure that each group has a representative mix of abilities, strengths, and weaknesses, and that each group member has a specific role to play (recorder, reader, checker, and so on). Explain to students that their individual "success" in these activities depends on the total group effort.

ACTIVITY CARD GUIDE

ACTIVITY 1: SUPER POSITIVES

Create a data file called SUPER POSITIVES using the fields listed below. Type a student name in each record. Lead a discussion about positive human qualities such as being thoughtful, helpful, a creative thinker, a good artist, or a strong athlete. Have each student draw a classmate's name at random and enter two "Positives" in the data file. Repeat the activity three times, until each student has a filled record. Check all of the records for spelling and content, then have each student search the data base for his or her own record to print out and place on the bulletin board.

SUPER POSITIVES DATA FILE

FIRST NAME:	LAST NAME:
POSITIVE 1:	POSITIVE 2:
POSITIVE 3:	POSITIVE 4:
POSITIVE 5:	POSITIVE 6:

ACTIVITY 2: SUPER HERO REUNION

Create a data file called REUNION using the fields listed below. Print out one empty record and photocopy it for students to fill out by hand before typing their data into the REUNION data base file. (Make sure that several records say "NO" in the R.S.V.P. field.) Have students practice sorting files by last name and first name, searching for other super heroes with similar powers, and so on. Students should then write three questions that could be solved by doing a sort or search. Collect their questions and assign them at random.

REUNION DATA FILE

EARTH NAME:	HERO NAME:
HOME PLANET:	
POWER 1:	POWER 2:
POWER 3:	
WEAKNESS:	COSTUME:
TRAVEL MODE:	JOB:
HEROIC DEEDS:	R.S.V.P. (YES/NO):

ACTIVITY 3: INCREDIBLE INTERVIEWS

On the blackboard, list the names of specialists and aides in your school. Have students brainstorm questions they would ask these people in an interview, and list these questions on the board. Use the questions and the sample fields below to create a data file called INTERVIEWS. Print out a blank record and copy it for students to use to record notes during their interviews. Pair students up, and assign or have pairs randomly select a person to interview, following the instructions on the activity card. Once the data base is completed, have students search and sort to answer questions about similarities and differences among school staff.

INTERVIEWS DATA FILE

DATE:	TIME:
LAST NAME:	FIRST NAME:
JOB TITLE:	TRAINING NEEDED:
YEARS AT JOB:	OTHER JOBS HELD:
MAKES JOB EXCITING:	MAKES JOB DIFFICULT:
KIDS CAN HELP BY:	FAMILY:
SPECIAL INTERESTS:	HOBBIES:

ACTIVITY 4: DATA BASE SURVEYS

Using the sample questions below, create a data base as an anonymous survey tool to evaluate student's true feelings about your teaching style and effectiveness. Students can then design their own data base survey, on paper, about topics of their choice. If possible, use these ideas to poll students periodically.

SURVEY DATA FILE

SAMPLE QUESTIONS
(CHOICES: A=ALWAYS, S=SOMETIMES N=NEVER)
I understand my teacher's directions:
My teacher is helpful:
My teacher treats me fairly:
My teacher listens to my ideas:
My teacher likes all the students:
My teacher makes me feel good:
My favorite subject is:
My least favorite subject is:

ACTIVITY 5: BOOK REPORT BLASTOFF

Create a data file called BOOK REPORTS, following the sample below; print out a blank record and photocopy it for students to use as a planner. Assign a reading topic such as "Space." Students may select books to read such as fiction, non-fiction, biographies, poetry, or mythology. After reading a book, students will fill in their plan sheet and then enter data into the BOOK REPORT file. Each student should then sort and search the file for another book to read!

BOOK REPORTS DATA FILE

NAME OF BOOK:	KIND OF BOOK:
AUTHOR'S FIRST NAME:	AUTHOR'S LAST NAME:
ILLUSTRATOR:	PUBLISHER:
COPYRIGHT DATE:	MAIN CHARACTER:
MAIN IDEA:	STUDENT REPORTING:

ACTIVITY 6: COUNT ON IT!

Set up a COUNT data file with fields like those listed below (but modify the math operations to fit your teaching objectives and your class's ability level). Each day, challenge students to count something encountered in their normal routine, such as number of minutes spent watching television, number of items in a collection, and so on. Have each student complete one record per day. At the end of the week, each student should search the file to select five records other than his or her own to print out and check for math accuracy. When all of the records have been corrected, sort the whole file by item and print it out for students to illustrate for a bulletin board display.

COUNT DATA FILE

NAME:	DATE:
ITEM COUNTED:	MY COUNT:
ADD 99:	SUBTRACT 17:
MULTIPLY BY 6:	DIVIDE BY 3:

ACTIVITY 7: HISTORY MYSTERIES

Following the model below, create a HISTORY data file for significant events in state, national, or world history. Print out a blank data record, and photocopy it for students to use as a plan sheet. Compile a list of events by name only, and have each student select one to research to fill out a plan sheet for by hand. Students should then go to the computer, enter data for all fields except the EVENT name, and then scramble the data in each field, Datanaut-style (for example, the PLACE for Paul Revere's Ride might come out to be "Ntsboo" instead of "Boston"). Students will print out their records and exchange them, challenging their classmates to unscramble the clues, find the record in the data file, and type in their guess of the EVENT.

HISTORY DATA FILE

EVENT:	KEY PEOPLE:
YEAR:	FACT1:
PLACE:	FACT2:
TYPE:	FACT3:

ACTIVITY 8: SCIENCE SEARCH

Divide your class into cooperative learning groups. Have each group select a science topic, such as astronomy or whales. Groups should develop a research question such as "Are whales in danger of becoming extinct?" Next, they'll gather initial data, design a data record, and devise abbreviations to simplify data entry (see sample). Each team will then compile a data file with a minimum of 10 records to search and sort for an answer to the research question. Have teams print out copies of their sorts and searches to display on the bulletin board with accompanying illustrations and/or graphs.

SAMPLE SCIENCE DATA FILE: WHALES

SPECIES: Blue
PRE-EXPLOITATION NOS.: 200,000+
PRESENT NOS.: 50,000+
B or T TYPE: Baleen
MAIN DIET: Plankton
HOW KILLED: Under guise of scientific research
COUNTRIES: Japan, Norway, Iceland
SOURCE DATA: National Geographic, Vol. 174
SOURCE DATE: December 1988

COPY & LAMINATE ACTIVITY CARDS

ACTIVITY 1 — SUPER POSITIVES

Your teacher will give you the name of a classmate to secretly observe today. Please watch for nice things, "SUPER POSITIVES," that you could say about this person.

Then go to the computer and use your class data base management program. Find the record with your classmate's name and type in two "Positive" statements. (Keep your positives short and sweet—there won't be room for long sentences!) Be sure and save the record when you're done. Your teacher will tell you what to do next.

ACTIVITY 3 — INCREDIBLE INTERVIEWS

Your teacher will give you and your interview partner the name of a person to interview.

1. Contact that person and make an appointment (date and time) to ask them some questions. Share the appointment information with your teacher.

2. With your partner, practice asking questions while note-taking.

3. For your interview appointment, take along an INTERVIEW plan sheet, several pencils, and a clipboard. Arrive prepared and on time, and be sure to thank the person at the end of the interview.

4. Enter your interview notes into the INTERVIEW data file, and save your record (before the evil Datanauts scramble your memory!). Print a hard copy of your data record for the bulletin board, and add a drawing or Polaroid picture of your subject.

ACTIVITY 5 — BOOK REPORT BLASTOFF!

It's time to read Super Hero-style!

1. Listen to the reading theme your teacher assigns to the class.

2. Find and read one book related to the theme.

3. Fill out a BOOK REPORT plan sheet on the book you read.

4. Add your data to a record in the BOOK REPORT data file on the computer. Check your spelling.

5. Save your record and then print a copy for the bulletin board.

6. Search and sort the data file for another book to read!

ACTIVITY 7 — HISTORY MYSTERIES

1. Select an historical event from the list your teacher shows you.

2. Do research to fill out the HISTORY plan sheet provided by your teacher.

3. Go to the computer, and enter data about your event into a record in the HISTORY data file—but leave the EVENT field blank.

4. Scramble the data in the other fields, Datanaut-style.

5. Print out your record, and give it to a classmate as a "History Mystery" to solve.

6. When a classmate gives you a History Mystery record to figure out, try to unscramble the clues. Then go to the computer, search the HISTORY data file for that record, and type in your guess in the EVENT field. Print it out for your classmate to check.

7. Think up some new and mysterious events to add to the HISTORY file!

ACTIVITY 2 — SUPER HERO REUNION

Dear Super Hero:
We're having an "Intergalactic Holiday Get Together" on December 15, 1989 on Planet Xoid. Please fill out the REUNION plan sheet your teacher gives you and then type responses into the REUNION data file. Be sure to R.S.V.P. "YES" if you can attend!

Your super friends,
Astrodata & Super Searcher

Read the invitation above and follow the instructions it gives. Be sure to save your record.

After your classmates have entered their records, practice searching and sorting to answer these questions on a separate sheet of paper.

1. Whose name is first when the records are alphabetized by last name?

2. Whose name is first when the records are alphabetized by first name?

3. Who is not able to attend the reunion?

4. Write three questions of your own that can be answered by doing a data base search.

ACTIVITY 4 — DATA BASE SURVEYS

Today you are going to take a survey that will help your teacher plan activities in the classroom. The survey is anonymous—you don't have to put your name on it. To take the survey, go to the computer, call up the data file called SURVEY, and answer each question by sharing your true feelings. Remember to save this record.

Next, think of another kind of survey you might like to take in your class or at your school. Write down the survey topic and key questions on a piece of paper, then design a data base record on paper using these questions as fields. Share your design with the class.

ACTIVITY 6 — COUNT ON IT!

Here's your chance to find out exactly how many there are of all kinds of things!

1. Each day, pick one thing to count. (How about the number of windows in your classroom, number of minutes you spend watching TV, or the number of baseball cards in your collection?)

2. Go the computer, call up the COUNT data file, and fill in a record about the item you counted that day.

3. When your teacher tells you to, select five COUNT records other than your own to print out and check for correct math.

4. Draw pictures by hand or on the computer to go with your own COUNT records.

ACTIVITY 8 — SCIENCE SEARCH

1. With the group your teacher assigns you to, select a science topic.

2. Decide as a group on a research question about the topic.

3. Read and gather data from three different sources or books.

4. On paper, design a data base on your topic. Agree on abbreviations or codes to simplify the data.

5. Create your data base on the computer.

6. Practice sorting, searching, and analyzing data to answer your research question.

7. Print a copy of any sorts and searches for the bulletin board.

8. Add pictures or illustrations.